

Biomass as a renewable source of chemicals for industrial applications

Abstract

Worldwide demand for cleaner burning fuels and ‘clean’ chemicals has been increasing from the global issues of environmental concern. This lead to a greater utilization of renewable resources to replace the old and existing fossil based feedstock for liquid fuels and chemicals. The ability to re-grow harvested biomass and recapture the carbon emitted to the atmosphere through photosynthesis allows the possibility of carbon neutrality encouraged the use of biomass. Moreso, the unstable rise of oil prices, the negative effects of petroleum on the environment and the advantages of biomass towards sustainability of resources accelerated the development and utilization of unused biomass. This paper reviewed some of the potentials of biomass as a source of chemicals for industrial applications. Pyrolysis is considered to be one of the most employed technologies for the conversion of biomass into bio-oil, char and gases. The utilization of biomass for chemical manufacture can significantly eliminate the harmful effects of fossil based chemicals on the environment.